

ANALYST:		VPDES NO	
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Parameter: Nitrite Nitrogen
Method: Spectrophotometric
04/02

METHOD OF ANALYSIS:

	18th Edition of Standard Methods 4500-NO ₂ -B
	EPA Methods For Chemical Analysis 354.1

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1)	Is the spectrophotometric method used for samples with NO ₂ -N concentrations ranging from 0.01 mg/L to 1.0 mg/L?[SM-1.a; 354.1-1.2]		
2)	Are samples containing NO ₂ -N concentrations greater than 1.0 mg/L diluted to fall within the desired range? [Permit]		
3)	Is absorbance measured with a spectrophotometer or filter photometer at 540 nm with a light path of 1.0 cm or longer? [SM-2.b; 354.1-5.1]		
4)	Are matched cuvettes used for colorimetric analysis? [Permit]		
5)	Are cuvettes free of fingerprints, scratches or stains? [Permit]		
6)	Are reagents prepared as described in the method? [SM-3; 354.1-6]		
7)	Are all reagents and standards prepared with nitrite - nitrate free distilled water? [SM-3.a; 354.1-6.1]		
8)	Is the buffer-colored reagent prepared monthly? [SM-3.b; 354.1-6.2]		
9)	Is the buffer-colored reagent stored in a dark colored bottle for both methods and also at 4°C for Standard Methods? [SM-3.b; 354.1-6.2]		
10)	Is the anhydrous sodium nitrite desiccated for at least 24 hours prior to preparation of the stock nitrite solution? [SM-3.e; 354.1-6.3]		
11)	Is the stock nitrite solution prepared quarterly? [Permit]		
12)	Is the stock nitrite solution preserved with 1 - 2 mL of chloroform per liter? [SM-3.e.1; 354.1-6.3]		
13)	Are the intermediate and standard nitrite solutions prepared daily? [SM-3.f/g; 354.1-7.4]		
14)	Are standards prepared using Class A volumetric glassware? [SM 1070 B.2; Permit]		
15)	Are samples adjusted to have a pH between 5 and 9 with 1N HCl or NH ₄ OH as required? [SM-4.b; 354.1-7.1]		
16)	Are suspended solids removed from the sample by filtration through a .45 micron filter? [SM-4.a; 354.1-7.2]		
17)	Is a new curve drawn when standards are not within $\pm 10\%$ of the curve? [Permit]		
18)	Are at least two standards which bracket the sample values run with each series of samples? [SM-5; 354.1-7.4]		
19)	Are 2 mL of buffer-color reagent added to 50 mL of sample or an aliquot diluted to 50 mL? [SM-4.b; 354.1-7.5]		
20)	Is color allowed to develop for at least 10 minutes and but no longer than 2 hours before reading absorbance? [SM-4.c; 354.1-7.5]		

PROBLEMS:

